

Datasheet

ADA-11040

RS485/RS422 to RF converter



APPLICATION

ADA-11040 converter is a device used for connection together devices with RS485/RS422 interface via wireless RF network. The converter transmits data with baud rate from 1200bps to 115200 bps via RS485/RS422 interface, and steady data format: 8 data bits, None parity bit, One stop bit (8N1).

ADA-11040 converter has screw terminals blocks for connection of RS485/RS422, power supply and SMA connector for RF antenna. The converters work in the same radio channel, create wireless RF network. ADA-11040 uses signals: RX+, RX-, TX+/A, TX-/B of RS485/RS422 for operation. To RS485 bus, constructed on the base of ADA-11040, can be connect 32 devices operating in half duplex mode to RS485(2W) bus to RS485(4W) bus.

The converter is adapted to supply an external voltage source from 10V to 30V and power 2W. Has implemented protection against opposite polarization of power supply and over-voltage protection on RS485/RS422 bus. ADA-11040 has galvanic isolation between power supply and RF and RS485/RS422 interfaces, has also optoisolation between RF and RS485/RS422 interface.

Transmission range in wireless RF network:

- in buildings - from 30m to 300m
- in an open area up to 1000m,

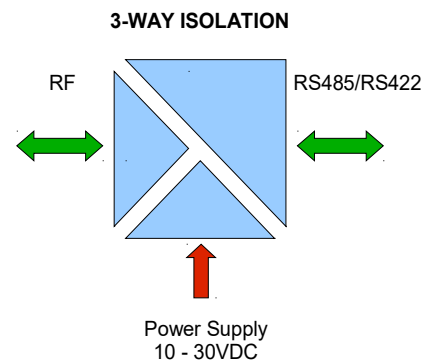
The transmission range can be enlarged by use the additional direction antennas

TECHNICAL DATA

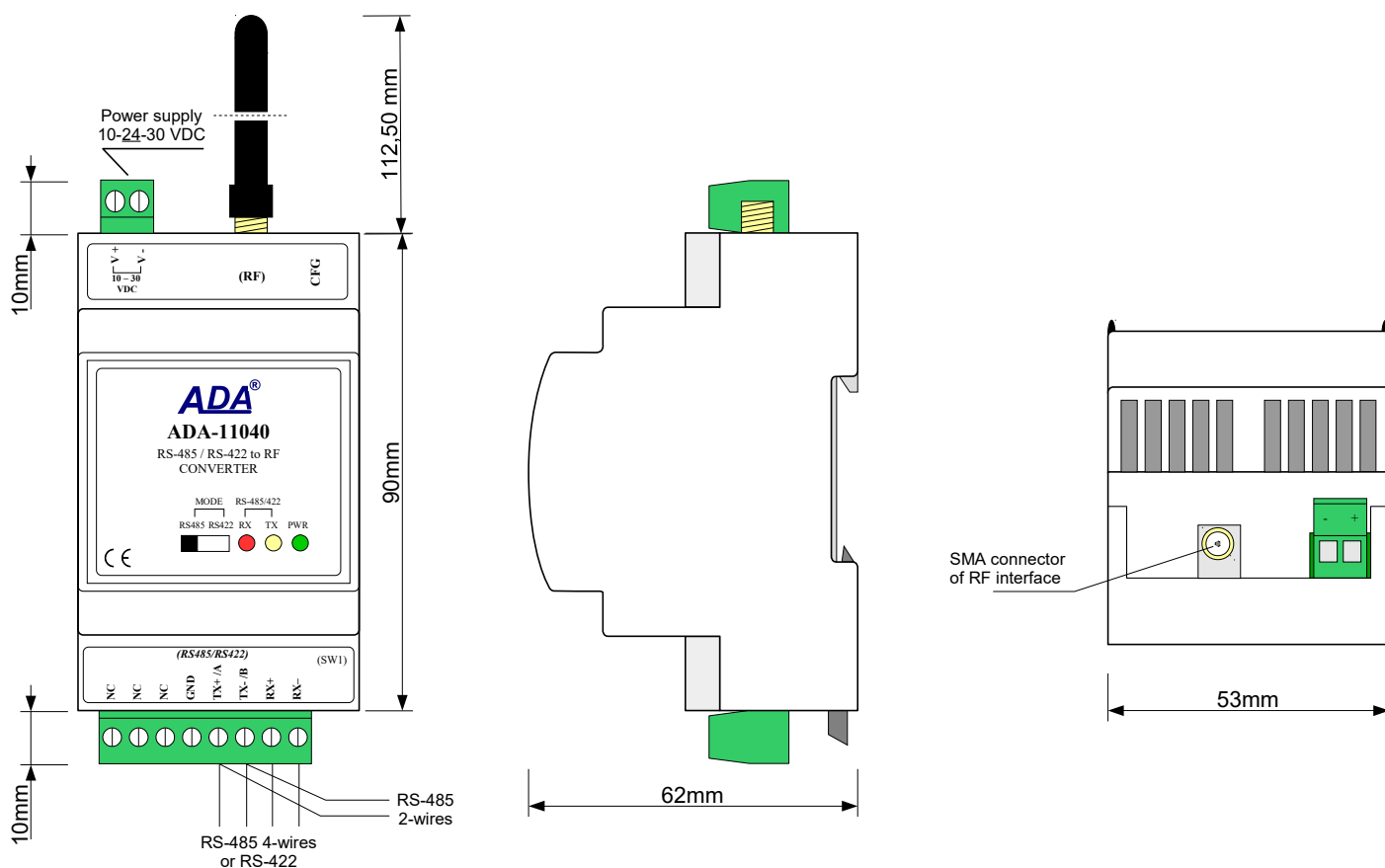
Transmission Parameters		
Interface	RF	RS485/RS422
Connector	SMA-Plug + Antenna	Screw terminal block - max. Ø 2,5mm ²
Max. Line length	- in buildings - from 30m to 300m - in an open area up to 1000m,	1200 m

Max. number of connected device	Unlimited	32
Transmission line	2-pair twisted cable, UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5(24AWG).	
Standards	ISAM 869/433/470/915 MHz	EIA-485, CCITT V.11
Baud rate	From 1200 bps to 115200 bps	From 1200 bps to 115200 bps Data format: 8N1
Transmission type	Asynchronism half duplex.	
Optical Signalization	<ul style="list-style-type: none"> • PWD – green LED, power supply, • RX - red LED, data receiving on RS485/RS422, • TX - yellow LED, data transmission via RS485/RS422. 	
Electrical Parameters		
Power requirements	10 - 24 - 30 V DC	
Power Cable	Recommended length of power cable – up to 3m	
Power	2W	
Protection from reverse power polarization	YES	
Galvanic Isolation	1kVDC or 3kVDC (3-WAY) depending on the version.	
Optoisolation	~3kV DC between RF and RS485/RS422 interfaces	
Electromagnetic compatibility	According to the PN-EN55024 norm PN-ETSI EN 301 489-1 V2.1.1:2017-08 PN-ETSI EN 300 220-2 V3.2.1:2018-12	
Safety requiring	According to the PN- EN60950 norm	
Environment	Commercial and light industrial.	
Environmental Parameters		
Operating temperature	-30 ÷ 50°C	
Humidity	5 ÷ 95% - non-condensing	
Storage temperature	-40 ÷ 70°C	
Casing		
Dimensions (W x D x H)	53mm x 90mm x 62 mm	
Material	PC/ABS	
Degree of casing protection	IP40	
Degree of terminal protection	IP20	
Weight	0,10 kg	
According to standards	DIN EN50022, DIN EN43880	
Location during work	Free	
Mounting method	On the rail compliant with DIN35 / TS35 standard.	

GALVANIC ISOLATION



DIMENSIONS AND CONNECTION



VERSIONS

ADA-11040 -	
Electronic versions:	
Basic on 868 MHz	1
Special on 433MHz	1A
Special on 470MHz	1B
Special on 915MHz	1C
Galvanic isolation:	
1kV DC (3-WAY) – standard	23
3kV DC (3-WAY)	33

Order example:

Product Symbol: **ADA-11040-1-23**

1 – basic version of electronic,
23 – 3-way galvanic isolation 1kV=,